

Industrial Pocket Modems

Tiny yet tough modems for the harshest environments!



FEATURES

- » Transmit or receive data through harsh conditions at speeds up to 33.6 kbps.
- » Connect to any PLC, RTU, or other industrial equipment.
- » Mount easily to DIN rails or flat panels.
- » Rugged casing and protected circuitry.
- » DC powered—no AC adapters required.
- » Windows® compatible.
- » Compliant with telephone systems around the world.

OVERVIEW

You can eliminate the difficulties often encountered with installing office-grade modems in severe environments. Just connect these pocket modems to any programmable logic controller (PLC), remote telemetry unit (RTU), or other industrial equipment. The Industrial Pocket Modems provide the reliability and features you need to get the data through!

Choose from General-Purpose, PLC Self-Dialing, or RS-422/RS-485 models.

All modems are DC powered, which means clunky AC adapters won't cramp your style. Mount them to a DIN rail or flat panel.

Generally speaking.

The General-Purpose [Industrial Pocket Modem](#) (MD3450A) is designed for electrical enclosures located in harsh environments. It supports all AT commands and S-registers, enabling it also to be set up as an external modem for any PC. Use it with any telecommunication or dialup networking software to establish dialup connections.

When you need a modem that's tough enough for some of the toughest environments, count on the General-Purpose [Industrial Pocket Modem](#). It handles the hazards of Class I, Division 2 (Zone 2) locations, and it operates in temperature extremes between -22 to +158°F (-30 to +70°C).

Alarming news that's good.

In addition to all the features of the General-Purpose Modem, the PLC Self-Dialing version (MD3451A) sports PLC self-dialing capabilities. It automatically dials out based upon an alarm using a PLC coil output.

Once a connection has been established, the PLC's system (programming) port is connected to the central computer at the other end of the phone link. At this time, the PLC may be polled by the computer as if the computer itself had originated the call.

When the PLC Self-Dialing Industrial Modem connects to the computer, it identifies itself so the computer can run the appropriate I/O driver and interrogate the PLC. The modem works with all brands and models of PLCs.

Locations that don't have PLCs also can originate calls to alert you to low tank levels, temperature conditions, or other alarms—just connect the appropriate alarm contact to the modem's input. When conditions warrant, the Self-Dialing modem will dial the pre-stored number and deliver the ID message to the computer at the receiving end. For example, the modem can be used to report low tank levels with a level switch.

With its auto-answer function, you also can use the PLC Self-Dialing [Industrial Pocket Modem](#) for two-way operation. The unit is user-configurable—just use the supplied CD-ROM.

Meeting high standards also is what this modem is all about. It's rated for UL® 508, CSA, and CE approvals. Find out today what the experts already know!

More connections—and more power to you.

The RS-422/RS-485 [Industrial Pocket Modem](#) (MD3452A) also features the basic functions of the General-Purpose Industrial Pocket Modem and includes an RS-422/RS-485 port. This additional port supports 4-wire full-duplex communication to RS-422 devices and party-line operation to 2- or 4-wire RS-485 equipment.

This modem can be connected to existing multi-drop devices and directly to industrial inputs and outputs.

The RS-422/RS-485 [Industrial Pocket Modem](#) is powered directly from a 48-VDC source.

An included CD-ROM enables you to configure the unit.

They're built like (think) tanks.

The rugged casing and protected circuitry keep the Industrial Pocket Modems working under conditions that will cause office-grade modems to fail. Face it, industrial applications are demanding. But our modems handle temperature extremes, power spikes, and other threats.

All in the family.

Our modems contain an industrial version of the same modem chip set found in PC internal modems. They support a full set of AT commands and protocols, plus they are fully compatible with Windows®.

The get-along gang.

These modems are compliant with telephone systems around the world. So why not simplify your industrial communications and improve your bottom line? Choose BLACK BOX® [Industrial Pocket Modems](#)!



MD3450A

TECH SPECS

Command Modes — All AT and S-register commands, including Class 1 & 2 fax commands

Data Compression — V.42 bis, MNP® 5

Distance — MD3452A: Up to 0.5 mi. (0.8 km) maximum

Electrical Safety — AS/NZS3260-1993;
Cenelec: EN61010-1 (IEC1010);
CSA: C22.2/14;
IEC: 950;
UL® 508

EMC Immunity — EN50082-1 (IEC801-2, 3, 4)

EMI Emissions — AS/NZS3458-1995;
Cenelec: EN55022;
FCC: Part 15, ICES-003, Class A

Error Correction — V.42, MNP 2–4

Fax Standards — Group III

Flammability — UL® 94V-0 materials

Hazardous Locations — Cenelec: EN50021 (EEx nA II T4);
Class I, Division 2, Groups A, B, C, D (Zone 2);
CSA: C22.2/213-M1987;
UL® 1604

Modem Standards — ITU — V.34+, V.34, V.32 bis, V.32, V.23, V.22, V.21; Bell — 212A, 103

Mounting — DIN rail or panel

Operating Environment — Temperature: -22 to +158°F (-30 to +70°C);
Humidity: 5 to 95% (noncondensing)

Operation — MD3452A only
RS-422: 4-wire full-duplex;
RS-485A: 2- or 4-wire party-line operation

Protocol — Asynchronous

Ringer Equivalency — 0.3

RS-232 Leads Supported — TX, RX, CTS, RTS, DCD, DTR, DSR, RI, GND

Speed — Fax: Up to 14.4 kbps;
Line: Up to 33.6 kbps;
RS-232 port: Up to 115.2 kbps

Surge Withstand — IEEE 472 (ANSI C37.90)

Telecomm Certifications — ACA: TS 001-1997, TS 002-1997;
FCC: Part 68;
Industry Canada: CS03-8, CTR21 (98/482/EC)

Vibration — IEC68-2-6

Interface — All: RS-232;
MD3452A only: Also has RS-422/RS-485

CE Approval — MD3450A

RoHS — MD3450A, MD3452A

Connectors — All: (1) DB9 F;
MD3450A–MD3451A: (2) RJ-11;
MD3452A: (1) RJ-11, (1) 5-screw terminal block

Indicators — LEDs: CD (carrier detected on phone line), TR (host connected and ready), RD (data coming from serial port), TD (data sent from serial port), Power

Power — MD3450A–MD3451A: 10–30 VDC, 65 mA directly from 12- or 24-VDC power source;
MD3452A: 10–52 VDC, 65 mA directly from 48-VDC power source

Size — 1.4"H x 4.8"W x 3.2"D (3.6 x 12.2 x 8.1 cm)

Weight: 0.5 lb. (0.2 kg)

What's included

MD3451A and MD3452A include:

- ◆ (1) 6-ft. (1.8-m) DB9 male/female cable.
- ◆ (1) CD-ROM
- ◆ Users' manual

Item

Code

Industrial Pocket Modems	
General-Purpose	MD3450A
PLC Self-Dialing	MD3451A
RS-422/RS-485	MD3452A
You may also need...	
DB9 Extension Cable	EDN12H-0010-MF